

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

Little Giant Ladder Systems, LLC,

No. 20-cv-2497 (KMM/ECW)

Plaintiff,

v.

**CLAIM CONSTRUCTION
ORDER**

Tricam Industries, Inc.,

Defendant.

Plaintiff Little Giant Ladder Systems, LLC (“Little Giant”), owns a patent on a locking mechanism for use in multi-position ladders—U.S. Patent No. 10,767,416.¹ Defendant Tricam Industries, Inc. (“Tricam”) manufactures and sells multi-position ladders that use similar locking mechanisms. Little Giant alleges that Tricam’s locking mechanisms infringe the ‘416 Patent. The parties ask the Court to construe four claim terms in the ‘416 Patent and they agree as to one additional construction.

I. Background

A. Multi-Position Ladders

The ‘416 Patent is one of a family of patents owned by Little Giant which relate to adjustable stepladders, ladder components, and related methods.² This case concerns locking

¹ Like the parties have done throughout this case, the Court refers to the patent-in-suit as “the ‘416 Patent.” The ‘416 Patent can be found at ECF No. 1-1.

² The ‘416 Patent is a “[c]ontinuation of application No. 14/886,566, filed on Oct. 19, 2015, now Pat. No. 9,784,033, which is a continuation of application No. 13/480,897, filed on May 25, 2012, now Pat. No. 9,163,455, which is a continuation of application No. 12/399,815, filed on Mar. 6, 2009, now Pat. No. 8,186,481.” [‘416 Patent at 1–2].

mechanisms used in multi-position or articulating ladders. [ECF No. 1 at ¶ 7; ECF No. 84; ECF No. 85]. The articulating ladders manufactured and sold by Little Giant and Tricam are height-adjustable and capable of use in multiple configurations. [ECF No. 85 at 1; ECF No. 84 at 0:01:35]. Although height-adjustable ladders employing locking mechanisms have been around for many years, more recent innovations in the design of such ladders and their rail locks have resulted in the parties' current commercially available products. [*Compare* ECF No. 84 at 0:02:04 (showing Figures 1 and 2 of the U.S. Patent No. 1,359,297 (1920)), *with* ECF No. 85 at 2].

For example, in the 1980s, Little Giant developed a multi-position ladder constructed of two pairs of inner and outer rails connected by a hinge, employing locking mechanisms known as “lock tabs” or “J-locks,” images of which are provided below.



[ECF No. 85 at 2; ECF No. 1 at ¶ 9]. When the locking mechanism in such a ladder is disengaged, the inner and outer rails are allowed to slide relative to each other; the locking mechanism can be reengaged so that the rails are maintained when the ladder has been adjusted to the appropriate height. [ECF No. 85 at 2]. In Little Giant's ladder, the lock tabs use internal springs that keep them pressed inward when engaged, toward the rails, and the locking mechanism includes an engagement pin that passes through openings in the inner and outer rails that are aligned to secure the ladder at a particular configuration. [*Id.* at 2–3]. These lock tabs presented some difficulties for the end user, including a tendency to pinch the user's hands or fingers; being somewhat difficult to use; and requiring significant effort, especially from smaller users, given that “actuating such locking members usually requires lateral displacement of the locking members outward, or away from, the side rails of the ladders.” [416 Patent Col. 1:57–2:38].

To address such issues, and develop ladders that are safer and more ergonomic, Little Giant developed a different style of locking mechanism which uses the rotational movement of a component to engage and disengage the locking pins, and a mechanical engagement to hold the component in the locked and unlocked positions until the user manipulates it. Little Giant branded its earlier commercial embodiment of these locking mechanisms as “Rock Locks,” which use a lever-style handle as shown here:



[ECF No. 1 at ¶¶ 10–11]. In 2008, Little Giant filed applications covering its new locking mechanism, resulting in the issuance of several patents, including the '416 Patent, which was issued on September 8, 2020. [*Id.* at ¶¶ 11–12].

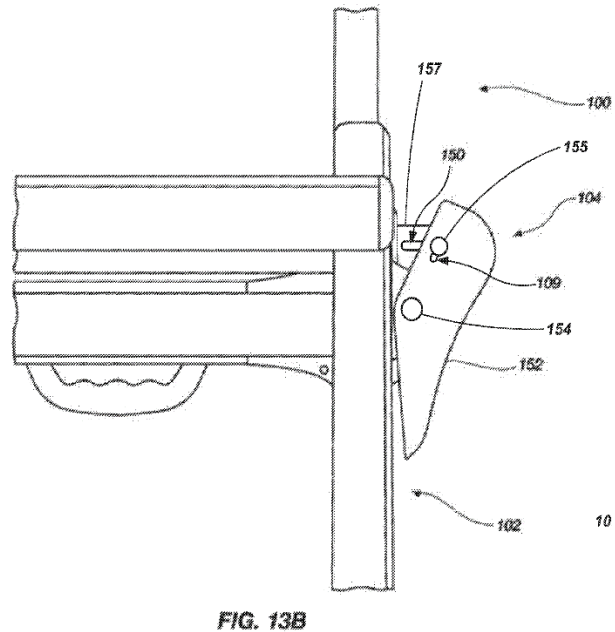
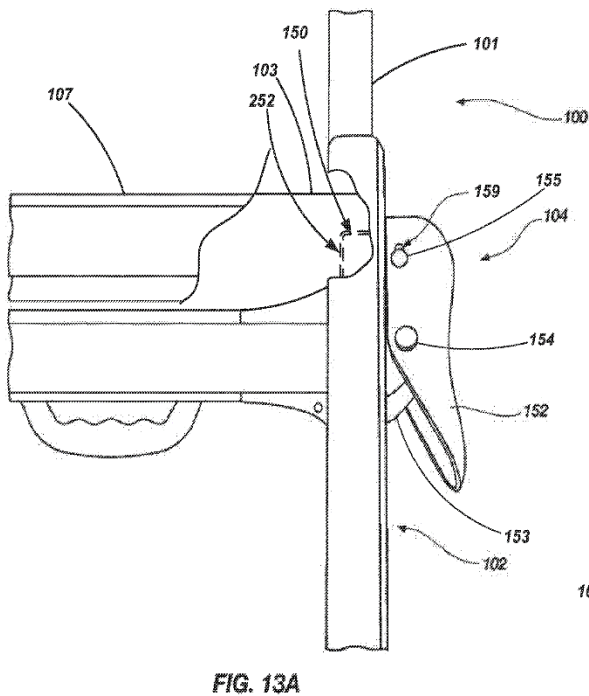
B. The '416 Patent

The '416 Patent claims a safer and more ergonomic innovation in the locking mechanism to be used in a multi-position ladder. ['416 Patent Col. 2:17–21]. The '416 Patent's Brief Summary of the Invention describes an embodiment that resembles the Rock Lock devices that Little Giant commercialized:

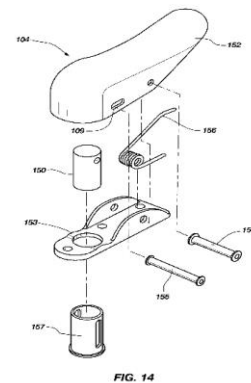
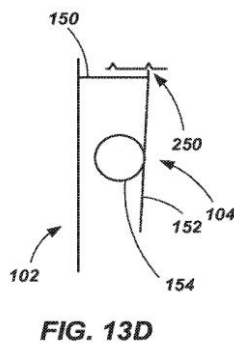
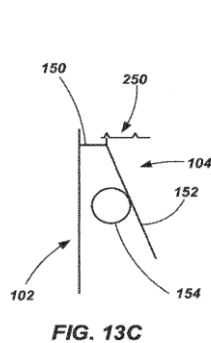
At least one locking mechanism is coupled to the outer rail, the locking mechanism including a lever and an engagement pin coupled therewith. The lever is located and configured to pivot relative to the outer rail such that, upon application of a force to a portion of the lever in a first direction towards the outer rail, the engagement pin is retracted in a direction that is different from the first direction. In one embodiment, the engagement pin is pivotally coupled with the lever.

[416 Patent Col. 2:30–38]. The '416 Patent describes another embodiment that uses a locking mechanism that “includes a pivoting structure disposed between” one of the pairs of rails of the rail assembly, and a “handle coupled with the pivoting structure.” [416 Patent Col. 2:67–3:7].

The Detailed Description of the Invention in the '416 Patent further discusses the claimed locking mechanism, referencing several figures depicted in the specification. For example, Figures 13A and 13B show a front-view of a ladder where the locking mechanism is a lever-style handle, in the locked and unlocked positions, respectively.



Figures 13C and 13D illustrate the “retaining mechanism” that maintains the first component in the locked and unlocked positions. And Figure 14 illustrates an expanded view of the locking mechanism.



The lever-style handle is not the only embodiment of the locking mechanism illustrated in the '416 Patent. Figures 15, 16, and 17 show an embodiment that “includes a handle rotatably coupled with a pair of links and which are in turn pivotally coupled to a pair of pins,” which can extend through openings in the inner and outer rails when the handle is “rotated in a desired direction (e.g., clockwise).” [‘416 Patent Col. 8:48-64].

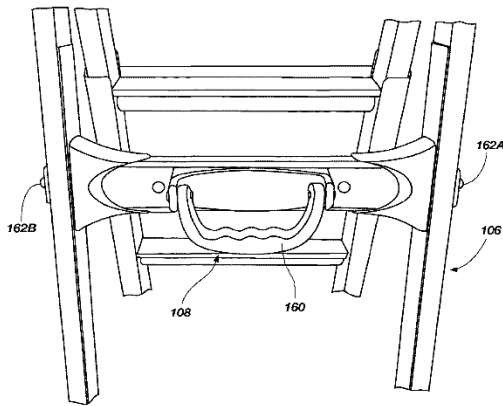


FIG. 15

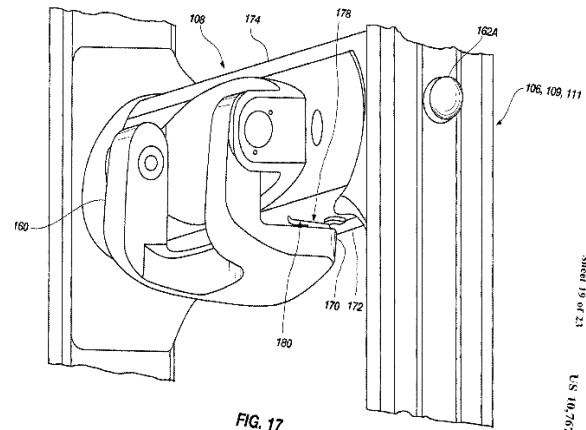


FIG. 17

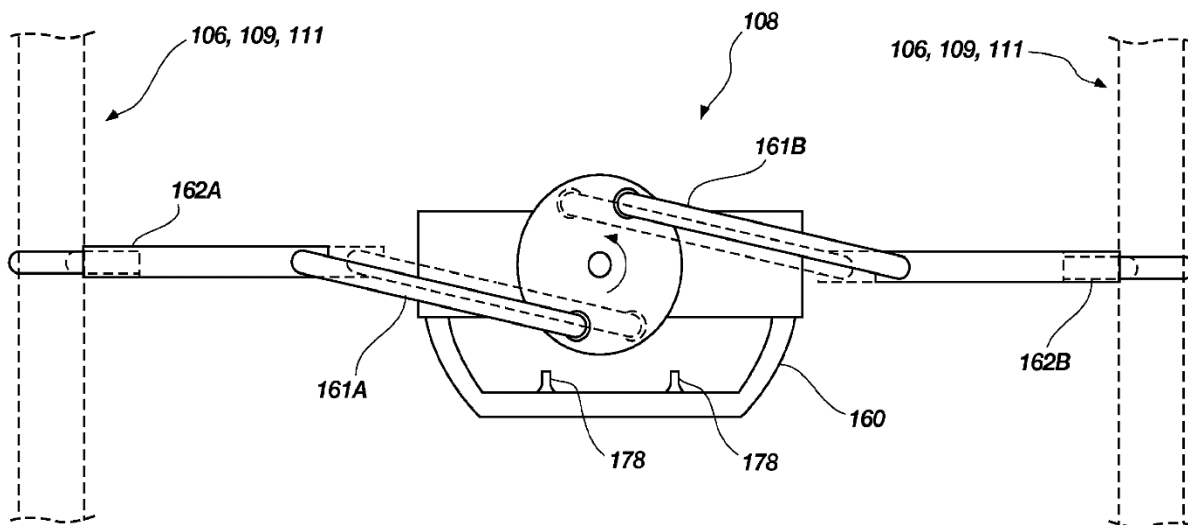


FIG. 16

C. The Parties' Dispute

After Little Giant introduced ladders employing the Rock Lock, it developed a new locking mechanism. This device is branded as the Rapid Lock. Meanwhile, Tricam began manufacturing, importing, and selling its Gorilla Ladder branded multi-position ladders using locking mechanisms marketed as “speed locks.” Below are images taken from Little Giant’s Complaint of Little Giant’s Rapid Locks and Tricam’s speed locks.



Rapid Lock (Little Giant)



speed lock (Tricam)

[ECF No. 1 at ¶ 10 (Rapid Lock); *id.* at ¶ 20 (speed lock)]. Little Giant alleges that several of Tricam’s multi-position ladders employing the speed locks infringe the ‘416 Patent because they use slidably coupled pairs of inner and outer rails, attach brackets to the outer rails, and rotating handles connected to pins engage openings in the rails when the handle is rotated. [ECF No. 1 at ¶¶ 17–25]. Little Giant filed its Complaint on December 8, 2020, alleging that Tricam is infringing the ‘416 Patent.

Not long after Little Giant initiated this case, Tricam filed a petition for Post Grant Review (“PGR”) of the ‘416 Patent.³ Tricam challenged the validity of the ‘416 Patent based

³ <https://portal.unifiedpatents.com/ptab/case/PGR2021-00044>.

on alleged flaws in the specification relating to the “retaining mechanism” limitation in Claim 1. [PGR2021-00044, Paper No. 2]. On August 3, 2021, the Patent Trial and Appeal Board (“PTAB”) panel reviewing Tricam’s PGR petition denied its request to institute post-grant review, concluding that the claim term “retaining mechanism” was sufficiently disclosed so that a person of ordinary skill in the art would understand what was covered by the ‘416 Patent. [*Id.*, Paper No. 10; PGR Decision, ECF No. 73-3].

II. Legal Standard

Claim construction, including the construction given to terms of art, is a matter of law. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 321 (2015) (citing *Markman*, 517 U.S. at 388-89)). It involves “determining the meaning and scope of the patent claims asserted to be infringed.” *Markman v. Westview Instruments*, 52 F.3d 967, 976 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996). “When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.” *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008); *Willis Elec. Co. v. Polygroup Macau Ltd. (BVI)*, No. 15-cv-3443 (WMW/KMM), 2021 WL 5769389, at *2 (D. Minn. Dec. 6, 2021) (same).

“In general, claim language means whatever it would have meant to a person of ordinary skill in the relevant art [or POSITA] at the time the patent application was filed.” *Oxygenator Water Tech., Inc. v. Tennant Co.*, No. 20-cv-358 (ECT/HB), 2021 WL 3661587 (D. Minn. Aug. 18, 2021) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005)). “Construction is most necessary when a claim uses technical terms for which the jury may not appreciate an ordinary meaning.” *Id.* (quotation omitted). “When the meaning of a claim term is clear and there is no genuine dispute as to its scope, a court may decline to issue a

construction.” *Id.* (citing *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008)). Courts will “depart from the plain and ordinary meaning of a claim term only ‘when a patentee acts as his own lexicographer’ or ‘when the patentee disavows the full scope of the claim term in the specification or during prosecution.’” *Id.* (quoting *Poly-Am., L.P. v. API Indus.*, 898 F.3d 1131, 1136 (Fed. Cir. 2016)).

In construing patent terms, courts primarily look to “intrinsic evidence,” including the words of the patent claims themselves, the patent specification, and the patent’s prosecution history. *Phillips*, 415 F.3d at 1313–14. Courts look to the specification in a patent because it “may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess,” or it may disclose the inventor’s “disclaimer, or disavowal, of claim scope.” *Id.* at 1316. The prosecution history may be illuminating because it indicates “how the PTO and the inventor understood the patent.” *Id.* at 1317. However, courts are cautioned that because the prosecution history “represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.* at 1317.

Courts may also look to extrinsic evidence when engaging in claim construction. *Oxygenator Water Tech.*, 2021 WL 3661587, at *2. “Extrinsic evidence consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Markman v. Westview Instruments*, 52 F.3d 967, 980 (Fed. Cir. 1995). However, extrinsic evidence is afforded less weight than intrinsic evidence. “Extrinsic evidence can shed useful light on the relevant art but it is less significant than the

intrinsic record in determining the legally operative meaning of disputed claim language.”

Oxygenator Water Tech., 2021 WL 3661587, at *2 (quotation omitted). Extrinsic evidence cannot establish the meaning of a claim term that contradicts the meaning derived from the intrinsic evidence. *Phillips*, 415 F.3d at 1318.

III. Discussion

With the legal standards governing claim construction in mind, the Court turns to the specific terms the parties ask the Court to construe in this case. The claim terms and phrases at issue include the following:

1. “substantial amount”;
2. “a substantial amount of the first bracket disposed within a cavity defined by the first component”;
3. “retaining mechanism”;
4. “when the first component is in the second rotational position, the first engagement pin is withdrawn from at least one of the first opening and the second opening”; and
5. “a first component rotatable about a defined axis.”

The parties agree on the construction that should be given to “substantial amount,” but disagree as to the remaining terms. The Court first addresses the foundational perspective of the person of ordinary skill in the art, and then turns to the construction of the contested claim terms.

A. The POSITA

Tricam proposes that the POSITA is an individual who holds a bachelor’s degree in mechanical or industrial engineering or a related field, and three to five years of engineering experience in mechanical design work, including at least two years in ladder design. [ECF No. 72 at 9 (citing Ver Halen First Decl., ECF No. 73 at ¶ 12)]. Little Giant did not propose its own POSITA parameters, and conceded at the hearing that Tricam’s proposal is

appropriate. The Court finds that the relevant POSITA for this case is an individual with the level of skill in the art suggested by Tricam and its expert. This is consistent with the findings of the PTAB during the recent PGR proceedings. [PGR Decision at 7–8].

B. “Substantial Amount”

The parties agree on the proper construction for the claim term “substantial amount,” which appears in independent Claim 1 and dependent Claim 5 of the ‘416 Patent. They agree that “substantial amount” means “more than a majority.” [ECF No. 64 at ¶ III]. The Court adopts the parties’ agreed-upon construction because it is consistent with both the claim language and the intrinsic evidence.

C. “A Substantial Amount of the First Bracket Disposed Within a Cavity Defined by the First Component”

Little Giant and Tricam disagree as to both the proper construction of certain terms within Claim 1 of the ‘416 Patent and whether these terms should be construed as part of a phrase or individually. The relevant claim terms—“disposed within” and “cavity”—and the broader claim phrase in which they appear are set forth in the table below, along with the parties’ proposed constructions.

Disputed Construction		
Claim Terms and Claims	Little Giant Construction	Tricam Construction
“a substantial amount of the first bracket is disposed within a cavity defined by the first component” (Claim 1)	“ more than a majority of the first bracket is hidden or covered by a hollowed out space (not passing all the way through) defined by the first component”	Tricam disagrees that this phrase should be construed as a whole, and instead asserts that two terms within the phrase (“disposed within” and “cavity”) should be individually construed. Tricam’s proposed construction of each is set forth below.

“disposed within”	See above.	“placed inside of”
“cavity”	See above.	“a hollowed-out space in a mass that does not pass all the way through”

[ECF No. 64 at ¶ IV, Nos. 1–3].

The threshold issue disputed by the parties is whether the phrase containing the claim terms “disposed within” and “cavity” should be construed as a whole, as Little Giant proposes, or whether the terms “disposed within” and “cavity” should be construed individually, as Tricam suggests.⁴ Some courts choose to construe an entire phrase to “resolve the disputes between the parties and provide the most appropriate context for construction.” *E.g., Lo v. Microsoft Corp.*, No. 2:07-cv-322, 2009 WL 2960427, at *7–8 (E.D. Tex. June 11, 2009) (construing “generally vertical,” “generally upright,” and “generally vertical figure-supporting surface” as part of an entire phrase where construing each term individually would “preclude a proper contextual construction”). Courts will also construe an entire phrase where individual constructions would be unnecessary or redundant. *Id.* at *8; *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“[Claim construction] is not an obligatory exercise in redundancy.”). However, recognizing that construction always requires consideration of the surrounding claim language, other courts have elected to construe claim terms individually where, for example, construction of a longer phrase would

⁴ Though they disagree on this point, neither party has explained why its preferred approach will lead to a better construction.

require the same term to be interpreted multiple times. *Green Pet Shop Enters., LLC v. Comfort Revolution, LLC*, No. 20-2130 (MAS) (TJB), 2021 WL 5450185, at *4 n.4 (D.N.J. Nov. 19, 2021) (citing *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003); *Phillips*, 415 F.3d at 1314; *Integrated Prod., Servs. v. Prod. Control Servs.*, No. H-11-1034, 2013 WL 4647316, at *11 n.9 (S.D. Tex. Apr. 7, 2013)). In either case, courts focus on the specific claim language and attempt to discern whether one approach or the other will “provide clarity for members of a jury.” *Green Pet Shop Enters., LLC*, 2021 WL 5450185, at *4 n.4.

It is important to note that, while Tricam offers a single construction of the terms at issue, Little Giant offers two different interpretations. Little Giant’s originally proposed construction of the entire phrase would define “substantial amount” as “more than a majority,” consistent with the parties’ agreement. It would then substitute “hidden or covered by” as the appropriate meaning of “disposed within.” And last, it would interpret “cavity” to mean “hollowed out space (not passing all the way through).” As a result, Little Giant’s request to construe the entire phrase functionally raises the same questions as Tricam’s position—“disposed within” and “cavity” are the claim terms that are in dispute. But in its responsive claim-construction brief, Little Giant proposed a second construction of the entire phrase. This alternative interpretation reads as follows: “more than a majority of the first bracket is disposed within a hollowed out space (not passing all the way through) defined by the first component so as to hide or cover more than a majority of the first bracket.” [ECF No. 81 at 14]. Through this construction, Little Giant suggests that “disposed within” need not be construed, but adds the hidden-or-covered-by concept to the latter part of the phrase.

The Court concludes that construing the phrase as a whole in this case, through either of Little Giant’s proposals, risks muddling the differences between the contested claim terms and how they affect the ‘416 Patent’s scope. Interpreting the terms individually, on the other hand, will not result in a construction that is “cumbersome and unclear.” *Integrated Prod., Servs.*, 2013 WL 4647316, at *11 n.9. Nor will individual constructions result in any obvious redundancies. Therefore, the Court will construe the terms “disposed within” and “cavity” individually.

1. “Disposed Within”

The term “disposed within” appears in Claim 1 of the ‘416 Patent where the first component, in its “first rotational position,” is described. [‘416 Patent Col. 10:44-50]. In that orientation, “a substantial amount of the first bracket is *disposed within* a cavity defined by the first component.” [‘416 Patent Col. 10:45–47]. Little Giant’s proposed construction suggests that “disposed within” must be understood to mean “hidden or covered by” the first component’s cavity. [ECF No. 70 at 13]. Tricam argues that “disposed within” should be interpreted to mean “placed inside of.” [ECF No. 72 at 10–14]. The Court concludes that “placed inside of” represents the better reading of the claim term “disposed within.”

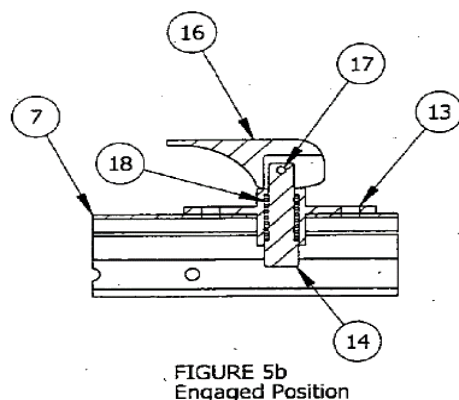
First, the plain language of the claim itself supports this reading. The ordinary lay meaning of “dispose” is “[t]o place or set in particular order; arrange.” *Dispose*, AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 522 (4th ed. 2006); *Dispose*, MERRIAM-WEBSTERS COLLEGIATE DICTIONARY 361 (11th ed. 2007) (“to place, distribute, or arrange esp. in an orderly way”). And the ordinary lay meaning of “within” is “[i]n or into the inner part; inside.” *Within*, AMERICAN HERITAGE DICTIONARY OF THE ENGLISH

LANGUAGE 1976 (4th ed. 2006); *Within*, MERRIAM-WEBSTERS COLLEGIATE DICTIONARY 1439 (11th ed. 2007) (“in or into the interior”). There is no basis in the record to suggest that “disposed within” would mean something different to a person of ordinary skill in the art. Such a person, considering the position of the first bracket relative to the cavity in the first component when the latter is in the first rotational position, would have understood that most of the bracket was positioned *inside* of that cavity. The claim language itself, therefore, supports a construction where a substantial amount of the bracket is *placed inside* of the hollowed portion of the handle.

Such a reading of the text is consistent with other intrinsic evidence as well. For example, several of the figures in the specification illustrate the bracket inside the locking mechanism’s handle. Figure 13A shows a front view of the ladder revealing a lever-style embodiment of the handle when it is in the (locked) first rotational position. In that orientation, the bracket, which is coupled to the outer rail, is positioned inside of the hollowed-out space in the handle. Embodiments of the handle depicted in Figures 15, 16, and 17 similarly suggest that more than a majority of the bracket is *inside* a cavity in these drawings as well.

The file history similarly supports this reading of “disposed within.” Specifically, the Court finds the patent examiner’s prior-art rejection of the original claim term “concealed” and Little Giant’s subsequent amendment to be instructive. Little Giant’s original application included the following claim language: “when the first component is in the first rotational position, a substantial portion of the first bracket is *concealed between the first rail and the first component*.” [ECF No. 73-7 at 2 (emphasis added)]. The examiner rejected Little Giant’s

application because the claims, as drafted, were anticipated by U.S. Patent Publication No. 2006/0169539 (“Grebinoski”). [ECF No. 73-1 at 7, 10]. The Grebinoski application involved an invention of a work platform attached to two adjustable-height ladder sections on either end, which employed “latch assemblies.” Those latch assemblies included a lever handle attached to the outer rails of the ladder sections, as depicted in Grebinoski Figure 5b:



[ECF No. 73-9 at 6].

The examiner found that Grebinoski teaches a locking mechanism attached to the rails of a ladder by a bracket, where a substantial portion of the bracket is concealed by a lever, as Little Giant had originally claimed in its own application for the ‘416 Patent. [ECF No. 73-10 at 8–9]. Although Little Giant disagreed with the examiner’s interpretation of Grebinoski, it amended the language of Claim 1 to read: “disposed within a cavity defined by the first component.” [*Id.* at 9]. In doing so, Little Giant indicated that this amendment was made “in an effort to further prosecution,” clarifying that “Grebinoski does not disclose any portion of the bracket ever being *within* a cavity of the lever.” [*Id.* (emphasis added)]. The prosecution history therefore indicates that Little Giant distinguished its invention from

Grebinoski based on a substantial amount of the bracket being “disposed within” the handle, as opposed to concealed (or “hidden”)⁵ between the handle and the ladder’s rail. In other words, Little Giant convinced the examiner to issue the patent after it amended its claim language, surrendering a scope where the locking mechanism’s bracket is merely “concealed between” the handle and the rail, and instead claiming a locking mechanism where most of the bracket is placed inside of a hollow portion of the handle.

Under the doctrine of prosecution disclaimer, a patentee cannot recapture through claim construction specific meanings of claim terms that are disclaimed during prosecution. *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). This rule applies where “the alleged disavowing actions or statements made during prosecution [are] both clear and unmistakable.” *Id.* at 1325–26. Such disavowal of claim scope can occur through amendments to the claims or through arguments made during prosecution to persuade the examiner to issue the patent. *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1359 (Fed. Cir. 2017). “The doctrine is rooted in the understanding that competitors are entitled to rely on those representations when determining a course of lawful conduct, such as launching a new product or de-signing-around a patented invention,” and it “ensures that claims are not construed one way in order to obtain their allowance and in a different way against accused infringers.” *Id.* (cleaned up) (quotations omitted). Here, Little Giant’s amendment in response to the Grebinoski rejection clearly and unmistakably surrendered claim scope where the bracket was merely concealed between the handle and the rail. A construction

⁵ *Conceal*, AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 381 (4th ed. 2006) (“To keep from being seen, found, observed, or discovered; *hide*.”) (emphasis added).

defining “disposed within” to mean “hidden or covered by” would improperly allow Little Giant to recapture the disclaimed meaning of “disposed.”

After the claim construction hearing, Little Giant filed a notice of supplemental authority, directing the Court’s attention to a recent Federal Circuit decision, *Genuine Enabling Tech LLC v. Nintendo Co.*, 29 F.4th 1365 (Fed. Cir. 2022), which applies the prosecution-history disclaimer rule. [ECF No. 91]. The Court agrees that *Genuine* is relevant, but disagrees that it supports Little Giant’s position. The *Genuine* decision reaffirms the rule that a disclaimer of claim scope must be clear and unequivocal, and the court found that the inventor had, in fact, made such a disavowal of claim scope in distinguishing his invention from a prior art reference that initially led the examiner to reject the application. However, the *Genuine* court concluded that the district court erred in relying on extrinsic expert testimony when it found that the inventor had broadly disavowed claim scope; instead, the *Genuine* court found that the inventor had only clearly given up a narrower scope when he distinguished his invention from the prior art. *Id.* at 1370 (describing the inventor’s response to the prior-art rejection and the examiner’s allowance of the claims); *id.* at 1374 (noting that the parties disagreed about exactly what was disavowed, and concluding that the district court improperly relied on extrinsic evidence in determining how broad the disclaimer was). Certainly, the disclaimer at issue in *Genuine* was more thorough than Little Giant’s disclaimer in this case. Indeed, the inventor repeated his “essential argument” distinguishing his invention from the prior art three times in response to the rejection. *Id.* at 1370. However, Little Giant’s disclaimer of locking mechanisms where the bracket is merely concealed between the handle and the rails to overcome Grebinoski is just as clear and unmistakable as

the disclaimer at issue in *Genuine*, if not as often repeated. Little Giant’s supplemental authority does not change the Court’s conclusion on this issue.

Accordingly, the Court finds that the intrinsic evidence supports an understanding that “disposed within” means “placed inside of” in the context of the ‘416 Patent.

Little Giant’s additional arguments to the contrary do not provide a persuasive reason to interpret “disposed within” to mean “hidden or covered by.” In support of its proposed construction, Little Giant relies primarily on the following statements made by the examiner in the Notice of Allowance:

The following is a statement of the reasons for the indication of allowable subject matter: the combination of positively recited structure and intended use language overcomes a rejection over the applied art since hindsight and/or a piecemeal rejection would be required in light of the fact that the examiner is interpreting “a substantial amount” from the phrase “a substantial amount of the first bracket is disposed within a cavity defined by the first component” as – more than a majority – when interpreted with the broadest reasonable interpretation in light of the original disclosure, and “a cavity” is being interpreted with the broadest reasonable interpretation in light of the original disclosure as a hollowed out space in a mass such as a cavity in a tooth, where the hollowed out space doesn’t pass all the way through [as shown by the drawings in the instant invention] **such that the first component would hide or cover more than a majority of the first bracket**. In other words, when interpreted with the broadest reasonable interpretation in light of the original disclosure, “a substantial amount of the first bracket is disposed within a cavity defined by the first component” is interpreted as – more than a majority of the first bracket is disposed within a hollowed out space [not passing all the way through] defined by the first component. This interpretation is being made in light of interpreting the claimed phrase with the broadest reasonable interpretation in light of the original disclosure.

[ECF No. 73-6 at 2–3 (brackets in original; emphasis added)].

It is certainly true, as the highlighted text above shows, that the examiner referred to the first component hiding or covering more than a majority of the first bracket. And one can easily observe, by reviewing the relevant figures in the specification, that the empty space

inside the handle does, in fact, hide or cover most of that bracket. But the excerpted statements from the Notice of Allowance say little about the proper construction of the term “disposed within.” Indeed, contrary to Little Giant’s suggestion that its “proposed construction adopts the examiner’s use of ‘hide or cover’ in place of the ‘disposed within’ language,” [ECF No. 81 at 8], nothing in the Notice of Allowance suggests the examiner was actually interpreting the “disposed within” term at all. Instead, the examiner’s statements expressly relate to the interpretation given to the terms “substantial amount” and “cavity.” [ECF No. 73-6 at 2–3 (explaining that the terms interpreted by the examiner included “substantial amount” and “cavity”)] And the passage concludes by simply repeating the “disposed within” term within the entire phrase:

In other words, when interpreted with the broadest reasonable interpretation in light of the original disclosure, “a substantial amount of the first bracket is disposed within a cavity defined by the first component” is interpreted as – more than a majority of the first bracket is disposed within a hollowed out space [not passing all the way through] defined by the first component.

[ECF No. 73-6]. When read in context, there is no suggestion that the examiner was expressing an understanding of what “disposed within” actually means. The Court disagrees that the Notice of Allowance supports Little Giant’s proposed construction.

Little Giant also argues that “concealed” and “disposed within” need not be “mutually-exclusive concepts,” [ECF No. 81 at 8], and it is true that a bracket that is mostly inside of a handle can be described as concealed or hidden by that handle. But a bracket could also be concealed, hidden, or covered by the handle without being *within* a cavity in the handle at all, and “within” is the claim term with which the Court’s analysis must begin. When Little Giant amended its claim language to overcome Grebinoski and to further

prosecution, it signaled to those of ordinary skill in the art that the claim scope required the bracket to be *inside* the hollow portion of the handle, not merely hidden or covered by that hollowed-out space.

For these reasons, as used in independent Claim 1, “disposed within” is construed to mean “placed inside of.” The same construction applies to the use of “disposed within” in the dependent Claim 5 as well.

2. Cavity

Tricam proposes that the claim term “cavity” be interpreted to mean “a hollowed-out space in a mass that does not pass all the way through.” As noted above, Little Giant has offered two different constructions of the entire phrase in which the term cavity appears.

Initial proposal: more than a majority of the first bracket is hidden or covered by *a hollowed out space (not passing all the way through)* defined by the first component.

Alternative proposal: more than a majority of the first bracket is disposed within a *hollowed out space (not passing all the way through)* defined by the first component *so as to hide or cover more than a majority of the first bracket.*

[ECF No. 70 at 16; ECF No. 81 at 9]. In the initial proposal, the italicized language replacing the term “cavity” is nearly the same as Tricam’s proposal, though it omits “in a mass.”⁶ As

⁶ At the hearing, Little Giant agreed that the hollowed out space is “in a mass,” and that such language could be included in a construction of the term. Tricam, which proposed including the “in a mass” language in its proposed construction agreed that it would not be error to leave “in a mass” out of the construction. These positions reveal that the parties do not believe that it is necessary to include “in a mass” to properly interpret the “cavity” term in the ‘416 Patent. The Court finds that using this “in a mass” language is not necessary for a proper construction of “cavity,” and it will not be included in the Court’s construction of this term.

the italicized language in the second construction reveals, Little Giant suggests that “cavity” has a similar meaning to Tricam’s interpretation. But the parties’ positions do not fully align on this point: Little Giant’s alternate proposal suggests that “disposed within” needs no construction, but that “cavity” should be construed to hide or cover more than a majority of the first bracket.

The Court finds that Tricam’s proffered construction better represents how a person of ordinary skill in the art would understand the term “cavity” in the context of the ‘416 Patent than either of Little Giant’s proposals. But first, the Court addresses the portions of this construction about which the parties appear to agree.

Apparent Agreement

The ordinary meaning of “cavity” is “an unfilled space within a mass; *esp.*: a hollowed-out space.” *Cavity*, MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 197 (11th ed. 2007); *Cavity*, American Heritage Dictionary of the English Language 297 (4th ed. 2006) (“1. A hollow; hole. 2. A hollow area within the body”). The language of both sides’ proposals is consistent with this ordinary meaning, and there is no basis in the record to conclude that one of ordinary skill in the art would understand the “cavity” described in the ‘416 Patent in a dramatically different way. As a result, the claim language itself supports an understanding that the claimed “cavity” is a “hollowed-out space.” Other intrinsic evidence is consistent with this construction. In particular, the concept of the locking mechanism’s first component including a hollowed-out space is consistent with the embodiments of the invention depicted in Figures 13A, 13B, and 15 through 17. In each, the first component of

the locking mechanism features a hollowed-out space defined by the first component, inside of which one finds more than a majority of the first bracket.

The intrinsic evidence also suggests that the hollowed-out space in the handle does not pass all the way through that handle, and both parties suggest inclusion of language to that effect. Conversely, the notion that a component includes a “hollowed-out space” does not easily lend itself to an interpretation in which the described cavity passes all the way through first component. One might more naturally describe such a component as containing an “opening” or a “tunnel,” rather than a “cavity.” The specification and the figures referenced above also support that a person of ordinary skill in the art would understand that the claimed cavity “does not pass all the way through” the first component. For example, the lever-style handle depicted in Figure 13A has a hollowed-out space in its mass that does not pass all the way through. Accordingly, the Court finds that a construction consistent with these essentially agreed-upon meanings is strongly supported by the intrinsic evidence, and overall, Tricam’s proposal represents the better reading of the term “cavity.”

Hide or Cover

As discussed above, Little Giant chose to propose two different possible constructions of the entire phrase containing the term “cavity.” And the major difference between both of those proposals and Tricam’s suggested construction is that Little Giant seeks to have the claim language understood to mean that the handle hides or covers the bracket. Its two proposals differ on where the “hidden-or-covered-by” concept finds purchase in the claim construction. Because the Court has already addressed Little Giant’s initial proposal and the suggested interpretation that “disposed within” meant “hidden or

covered by,” the Court focuses here on Little Giant’s alternative construction, in which Little Giant adds the clause “so as to hide or cover more than a majority of the first bracket” to the end of the longer phrase containing the term “cavity.”⁷ The Court rejects this interpretation of the claim language because it is not supported by the intrinsic evidence. As an initial matter, the proposal suffers from a glaring redundancy. The phrase would begin with the agreed upon understanding of “substantial amount of the first bracket” meaning “more than a majority of the first bracket,” and then conclude with the same language. Read this way, the claim would read that “more than a majority of the first bracket” is inside of the cavity so as to hide “more than a majority of the first bracket.” Such repetition adds nothing to the understanding of what is being claimed. Instead, this proposal awkwardly adds cumbersome language to the end of an otherwise sensible phrase to introduce the concept of hiding the bracket.

Additionally, the Court finds that adding “so as to hide or cover” the bracket at the end of the phrase attempts to reclaim surrendered scope in precisely the same way that reading it into the meaning of “disposed within” would. Little Giant points again to the examiner’s comments in the Notice of Allowance. [ECF No. 81 at 7–8]. However, for the same reason the Court rejected Little Giant’s reading of “disposed within” as including the

⁷ Little Giant’s initial construction did not suggest that the “cavity” should be understood by reference to the “hidden or covered by” language at all. Instead, Little Giant’s initial proposed construction substituted the “hidden or covered by” language for “disposed within.” To read “cavity” to mean “hidden or covered by” in Little Giant’s first construction would mean that “disposed within” disappears from the claim language. Such a reading would also assume that a person of ordinary skill in the art would give the claim language a tortured and nonsensical reading in which “cavity” acts as both a noun and a verb acting upon itself. There is no support for such a reading of the ‘416 Patent’s claim language.

requested language, the Court finds Little Giant cannot use the term “cavity” to reassert claim scope that it surrendered during its prosecution of the ‘416 Patent. Little Giant changed the claim language in response to the examiner’s prior-art rejection based on Grebinoski, and cannot now undo that concession.

Moreover, the examiner was not consistent in the use of the hide-or-cover phrasing in the Notice of Allowance itself. Immediately after including the hide-or-cover language, the examiner abandoned it. The examiner summed up the understanding of the relevant claim language as follows:

In other words, when interpreted with the broadest reasonable interpretation in light of the original disclosure, “a substantial amount of the first bracket is disposed within a cavity defined by the first component” is interpreted as – more than a majority of the first bracket is disposed within a hollowed out space [not passing all the way through] defined by the first component.

[ECF No. 73-6 at 2–3]. If the Notice of Allowance reflected an understanding from the examiner and Little Giant that what was being claimed was a “cavity” that merely hides or covers the bracket, one would expect the examiner’s statement to reflect such a meaning more clearly. Accordingly, the Court finds that the Notice of Allowance is not strong intrinsic evidence that the “cavity” limitation was understood by the inventor or the examiner to include the hiding-or-covering concept.

3. Conclusion

Based on the Court’s construction above of the terms “substantial amount,” “disposed within,” and “cavity,” the Court concludes that “a substantial amount of the first bracket disposed within a cavity defined by the first component” means: “more than a

majority of the first bracket is placed inside of a hollowed-out space (not passing all the way through) defined by the first component.”

D. Retaining Mechanism

The parties disagree on the proper construction of the term “retaining mechanism,” which appears in both independent Claim 1 and dependent Claim 5. Not only do the parties disagree on the meaning of the term, but they disagree on the legal rules applicable to its construction. As reflected in the chart below, Little Giant argues that ordinary rules of claim construction apply, and Tricam contends that “retaining mechanism” is a so-called means-plus-function term subject to construction pursuant to 35 U.S.C. § 112, ¶ 6.⁸

Disputed Construction		
Claim Terms and Claims	Little Giant Construction	Tricam Construction
“at least one retaining mechanism configured to maintain the first component in the first rotational position until application of a first predetermined force is applied to the first component to displace it towards the second rotational position, and wherein the at least one retaining mechanism is further configured to maintain the first component in the second rotational position until application of a second	retaining mechanism: “a mechanism that holds one mechanical part in relation to another through biasing a surface into engagement with another surface”	<p>“Retaining mechanism” is a means-plus-function term that must be construed in accordance with 35 U.S.C. § 112, ¶ 6.</p> <p>Function: to maintain the first component in the first rotational position until application of a first predetermined force is applied to the first component to displace it towards the second rotational position, and to maintain the first component in the second rotational position until</p>

⁸ This statutory provision has been revised so that the rule permitting means-plus-function claiming now appears in 35 U.S.C. § 112(f). Because the ‘416 Patent was issued before the revision, the Court will refer to § 112, ¶ 6, which is sometimes also cited as § 112(6).

force is applied to the first component” (Claim 1, 5)		application of a second force is applied to the first component” Corresponding structure: a detent (if any exists)
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[ECF No. 64 ¶ IV, No. 4]. But aside from a strong disagreement as to whether the means-plus-function framework applies, the parties are in considerable agreement as to how the terms should ultimately be construed.⁹

After careful analysis, the Court concludes: (1) “retaining mechanism” is a means-plus-function term that invokes § 112, ¶ 6; (2) the relevant functions are to maintain the first component in the first rotational position until application of a first predetermined force is applied to the first component to displace it towards the second rotational position, and to maintain the first component in the second rotational position until application of a second force is applied to the first component; and (3) the specification discloses corresponding structure for performing that function, namely a “detent.”

1. Means-Plus-Function Legal Standards

“Whether claim language invokes 35 U.S.C. § 112 ¶ 6, is a question of law. . . .” *Rain Computing, Inc. v. Samsung Elec. Am., Inc.*, 989 F.3d 1002, 1005 (Fed. Cir. 2021) (citing

⁹ The Court does not adopt Little Giant’s proposed construction, but it appears that Little Giant’s proposal largely mirrored “retaining mechanism” and a “detent mechanism,” and a § 112 ¶ 6 analysis includes not only the corresponding structure in the specification, but also equivalents, just as in Tricam’s proposal. Neither of the parties’ briefing nor the argument at the hearing made clear why the debate about the application of § 112 ¶ 6 was important if the inquiry ultimately led to such a similar place, but the Court saves that question for another day.

Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1346 (Fed. Cir. 2015). “Means-plus-function claiming occurs when a claim term is drafted in a manner that invokes [§ 112 ¶ 6].”

Williamson, 792 F.3d at 1347. The statute provides that:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6. By enacting the statute:

Congress struck a balance in allowing patentees to express a claim limitation by reciting a function to be performed rather than by reciting structure for performing that function, while placing specific constraints on how such a limitation is to be construed, namely, by restricting the scope of coverage only to the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof.

Williamson, 792 F.3d at 1347–48.

If a claim uses the word “means,” then there is a rebuttable presumption that § 112, ¶ 6 applies. *Id.* at 1348. On the other hand, if the term “means” is absent from a claim element, then there is a rebuttable presumption that § 112, ¶ 6 does not apply. *Id.* But the presence or absence of the word “means” does not ultimately control whether § 112, ¶ 6 applies. *Id.* “For example, generic terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means’ because they typically do not connote sufficiently definite structure and therefore may invoke [the means-plus-function statute].” *Egenera, Inc. v. Cisco Sys., Inc.*, 972 F.3d 1367, 1373 (Fed. Cir. 2020) (quotations omitted). “Such terms may amount to generic terms or black box recitations of structure or abstractions. Or a term may amount to a coined nonce word—that is, a word invented for one occasion only.” *Id.* (cleaned up). If that is the case,

then § 112, ¶ 6 applies because the claim term is “simply a generic substitute for ‘means.’” *Id.* at 1375.

“To determine whether § 112 ¶ 6 applies to a claim limitation, we must inquire ‘whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.’” *Rain Computing*, 989 F.3d at 1005 (quoting *Williamson*, 792 F.3d at 1348). In making that determination, courts “look first to intrinsic evidence, and then, if necessary, to the extrinsic evidence.” *Engera*, 972 F.3d at 1373 (quotation omitted). Courts ask whether the disputed term, “as the name for structure, has a reasonably well understood meaning in the art.” *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996).

Where, as here, the word “means” is not present, the rebuttable presumption that § 112 ¶ 6 does not apply can be overcome. In such cases, the statute “will apply if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Williamson*, 792 F.3d at 1348 (cleaned up).¹⁰ “If the presumption against means-plus-function interpretation is overcome, [the court] must identify the claimed function and then

¹⁰ Prior to *Williamson* the Federal Circuit had characterized the presumption that the statute does not apply when the term “means” is not used as a “strong” one, but the *Williamson* court abandoned that framework and explained that overcoming that presumption does not require a “heightened evidentiary showing” or a “showing that the limitation essentially is devoid of anything that can be construed as structure.” 792 F.3d at 1349. The Federal Circuit has cautioned against applying pre-*Williamson* precedent. See *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1373 (Fed. Cir. 2015) (noting that the pre-*Williamson* case cited by appellant “was applying our now superseded case law, which imposed a heavy presumption against finding a claim term to be in means-plus-function format [W]e apply no such heavy presumption here.”).

determine what structure, if any, disclosed in the specification corresponds to the claimed function.” *Egenera*, 972 F.3d at 1373 (quotation omitted).

2. “Retaining Mechanism” is a Means-Plus-Function Term

Against this legal backdrop the Court evaluates whether “retaining mechanism” is a means-plus-function term. Tricam argues that the “retaining mechanism” limitation is a means-plus-function term because Claim 1 recites two functions but fails to identify what structure accomplishes them. According to Tricam, “mechanism” is not modified by any term connoting structure, but only a term describing function, so it cannot avoid means-plus-function treatment. Instead, Tricam argues that “retaining mechanism” could cover virtually anything capable of performing the described function. [Def.’s Br., ECF No. 72 at 15–22].

Little Giant argues that “retaining mechanism” is not a means-plus-function term and evaluating it as one divorces the claim language from the term “detent,” which is found elsewhere in the specification. Little Giant’s strongest argument on this point is that during the PGR proceedings, the PTAB rejected Tricam’s argument that “retaining mechanism” invokes § 112 ¶ 6. The PTAB concluded that “the ‘416 patent Specification disclosure is consistent with [Little Giant’s] argument that the terms ‘detent’ and ‘retaining mechanism’ are described as alternative means for the same device, which is a structure.” In encouraging the Court to adopt the same analysis, Little Giant emphasizes that the PTAB’s decision is part of the intrinsic evidence and that such prior constructions are persuasive authority regarding the appropriate scope of claim language. Further, Little Giant asserts that the ‘416 Patent specification’s use of the phrase “detent or retaining mechanism” informs a person of

skill in the art that the claimed retaining mechanism is a detent mechanism. [Pl.’s Resp., ECF No. 81 at 9–14].

For the reasons that follow, the Court concludes that “retaining mechanism” is a means-plus-function term subject to § 112 ¶ 6. Because the claim language does not use the term “means,” there is a rebuttable presumption that § 112 ¶ 6 does not apply. However, the Court finds that presumption has been overcome in this case. And not only is the Court not bound by the PTAB’s contrary reading, but it finds that interpretation unpersuasive.

The language of Claim 1 is, of course, the relevant starting point. Considering the word “mechanism” itself, the claim is expressed using a generic term that “is tantamount to using the word ‘means’ because [it does] not connote sufficiently definite structure.” *Egenera*, 972 F.3d at 1373; *see also Williamson*, 792 F.3d at 1350 (explaining that “[g]eneric terms such as ‘mechanism,’ . . . and other nonce words that reflect nothing more than verbal constructs” can be used as substitutes for “means” and invoke § 112 ¶ 6). “Retaining” is also a functional term that does not have any structural connotation. In the text of the claim, there is no plainly structural language connected to the term “retaining mechanism.” Instead, the surrounding language describes what that mechanism *does*, indicating that it is configured to “maintain” the first component in either of two rotational positions until a force is applied to the first component to displace it to the next position. [‘419 Patent, Col. 10:55–64]. This language is functional, not structural: it gives no sense of what structure or form the claimed “retaining mechanism” takes, but instead clearly describes what it does.

By contrast, *Phillips* provides a useful example of claim language that identifies sufficient structure to perform a function so that it is not subject to the rules governing

means-plus-function claiming. In *Phillips*, the claim language specifically referred to a “means disposed inside the shell for increasing [a building module’s] load bearing capacity.” 415 F.3d at 1311. Use of the term “means” triggered the rebuttable presumption in favor of means-plus-function treatment, but the court found the presumption was overcome. The *Phillips* court observed that “the claim specifically identifies ‘internal steel baffles’ as structure that performs the recited function of increasing the shell’s load-bearing capacity.” *Id.* The court held that the term “baffles” was structural and was not a placeholder or generic term for structure to be “filled in by the specification.” *Id.* The court then looked to language in the claims themselves as well as references to baffles in the specification to conclude that the use of the claim term “baffles” communicated sufficient structure. *Id.* (discussing the recitation of “steel baffles” as referring to a “particular physical apparatus” and the characterization of the claims “extending inwardly from the steel shell walls” as “plainly impl[ying] that the baffles are structures”). Therefore, means-plus-function analysis did not apply. Unlike the patent in *Phillips*, in Claim 1 of the ‘416 Patent, one finds no language connoting structure within the claim language itself.

Second, the Court finds that the reference to a “detent or retaining mechanism” in the ‘416 Patent’s written description of the invention is insufficient to avoid application of § 112 ¶ 6.¹¹ [‘416 Patent, Col. 7:59–64]. Though the specification is an important piece of

¹¹ The ordinary lay meaning of “detent” is “a device (as a catch, dog, or spring-operated ball) for positioning and holding one mechanical part in relation to another in a manner such that the device can be released by force applied to one of the parts.” *Detent*, MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 340 (11th ed. 2007); *Detent*, THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 494 (4th ed. 2006) (“A catch or lever that locks the movement of one part of a mechanism.”).

intrinsic evidence for understanding the meaning of claim language, the claim language itself does not include the term “detent.” *Teleflex, Inc. v. Ficosa North American Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002) (“The claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim. The language of the claim frames and ultimately resolves all issues of claim interpretation.” (cleaned up)). And as the Court explains in more detail below, when deciding the threshold question of whether the disputed term connotes sufficient structure, courts must find that structure in the claim language itself and err when they import structure from the specification.

The absence of structural language from the claim language distinguishes this case from *Greenberg*, which Little Giant suggests supports its position that the “detent or retaining mechanism” reference in the specification takes this claim term out of means-plus-function territory. The *Greenberg* court reversed a district court’s means-plus-function construction of the claim term “detent mechanism,” explaining that the noun “detent” denoted a “type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms.” 91 F.3d at 1583. Further, the court observed that although “‘detent’ does not call to mind a single well-defined structure,” the important thing was that the term “detent mechanism . . . as the name for structure, has a reasonably well understood meaning in the art.” *Id.* While that may be true, the obvious distinction between the claim language in the ‘416 Patent and the patent at issue in *Greenberg* is that the latter recited a “detent mechanism” right in the claims while the former only refers to a “detent” in the specification. Little Giant’s position that the “retaining mechanism” in the

‘416 Patent should be understood in the same manner as the *Greenberg* court interpreted “detent mechanism” is simply not persuasive.

Third, although the Court is aware that the PTAB adopted a contrary interpretation, that does not alter its conclusion that “retaining mechanism” is a means-plus-function term. Admittedly, the PTAB’s interpretation of this claim term during the PGR proceeding is intrinsic evidence and its reasoning can be considered a persuasive indicator regarding claim scope.¹² During the PGR proceeding, Tricam argued that “detent” means something different from “retaining mechanism,” but the PTAB disagreed. The PTAB found that the ‘416 Patent specification was consistent with Little Giant’s position that the terms “detent” and “retaining mechanism” are alternative names for the same device, which is a structure. The PTAB pointed to illustrations of a “detent or retaining mechanism” as a single structure and stated that Figures 13C and 13D illustrated a detent in the first and second rotational positions. Further, the PTAB reasoned that the ‘416 Patent incorporated U.S. Pat. No. 4,407,045 (“Boothe”) by reference, and Boothe described a “pair of detent balls . . . and spring,” which the PTAB considered to be “a single structure for the ‘detent or retaining mechanism.’”¹³ The PTAB also concluded that a person of ordinary skill in the art “would have understood that the terms ‘detent or retaining mechanism’ are alternative means for the

¹² See *MyMail, Ltd. v. LAC Search & Media, Inc.*, No. 17-CV-04488-LHK, 2020 WL 1043659, at *6 (N.D. Cal. Mar. 4, 2020) (“Although these decisions [from other district courts and the PTAB in IPR proceedings] are not binding, the Court nevertheless recognizes these prior constructions as persuasive authority.”).

¹³ The Boothe patent for a “Ladder Hinge and Multi-Position Locking Mechanism Therefor” was assigned to Little Giant. [ECF No. 71-1 at 131].

same structural device.” The examiner agreed that a detent or retaining mechanism was “an art recognized definition.” [PGR Decision at 10–11].

Having carefully considered the PTAB’s construction, the Court finds that following its reasoning would misapply the appropriate analytical framework established by the Federal Circuit. In short, Little Giant’s argument and the PTAB’s analysis commit the same error. At the first step of the analysis, they look beyond the claim language and use structure identified in the specification to determine that “retaining mechanism” itself has an inherent structural definition that would be understood by one of skill in the art. This is incorrect.

The Federal Circuit’s decision in *MTD Products Inc. v. Iancu* is instructive. 933 F.3d 1336 (Fed. Cir. 2019). The dispute in *MTD Products* concerned the proper construction of the claim term “mechanical control assembly” as part of a zero-turn radius (“ZTR”) vehicle, specifically a lawn mower. *Id.* at 1338–39. Toro Company challenged the validity of the patent through *inter partes* review, and the PTAB concluded that “mechanical control assembly” was not a means-plus-function term. The PTAB agreed with Toro that the specification illustrated and described the specific structure that makes up the claimed mechanical control assembly and how it connects to and operates with other components. *Id.* at 1340. MTD Products, the patent owner, appealed the PTAB’s decision and the Federal Circuit reversed. The *MTD Products* court agreed with the PTAB’s initial observation that the term “mechanical control assembly” was similar to other generic, black-box words that have been found to be subject to § 112, ¶ 6. *Id.* at 1343. The court also agreed with the PTAB that the surrounding claim language was largely functional, which indicated that § 112 ¶ 6 applied. *Id.* Further, the court found no error in the PTAB’s acceptance of MTD’s extrinsic evidence

indicating there was no established meaning in the mechanical arts for a specific structure connoted by “mechanical control assembly.” *Id.* at 1343–44.

But the *MTD Products* court found that the PTAB erred “when it relied on the specification’s description of a ‘ZTR control assembly’ to conclude that the claim term ‘mechanical control assembly’ has an established structural meaning” and vacated the PTAB’s interpretation. *Id.* at 1344. The court explained that merely because the specification “discloses a structure corresponding to an asserted means-plus-function claim term does not necessarily mean that the claim term is understood by persons of ordinary skill in the art to connote a specific structure or a class of structures.” *Id.* The *MTD Products* court then clarified that means-plus-function analysis proceeds in two steps. *Id.* In the first step, the court asks whether “the claim limitation connotes ‘sufficiently definite structure’ to a person of ordinary skill in the art.” *Id.* If the limitation is “in means-plus-function format, the second step requires us to review the specification to identify the structure that performs the claimed function(s) and thus ‘corresponds to’ the claimed means.” *Id.* These inquiries, the *MTD Prods.* court explained, are related but separate, and the PTAB erred because it “conflated these distinct inquiries, holding that the specification’s disclosure of corresponding structure demonstrates that the alleged means-plus-function term is sufficiently definite so as to not invoke § 112, ¶ 6.” *Id.* Such an analysis, the court explained, would render § 112 ¶ 6 a nullity:

The Board’s analysis implies that so long as a claim term has corresponding structure in the specification, it is not a means-plus-function limitation. This is not consistent with our prior decisions. Indeed, this view would seem to leave § 112, ¶ 6 without any application: any means-plus-function limitation that met the statutory requirements, i.e., which includes having corresponding structure

in the specification, would end up not being a means-plus-function limitation at all.

Id. Finally, the *MTD Products* court explained that “the specification plays a role in assessing whether particular claim language invokes § 112, ¶ 6,” but the specification will only do so when it renders a generic term “sufficiently structural to a person of ordinary skill in the art.”

Id.

Here, the claim term “retaining mechanism” operates as a generic descriptor akin to “means” and the surrounding language is strongly indicative of means-plus-function claiming. The “retaining mechanism” is described as being “configured to” maintain the first component in one of two orientations until application of a force, which is plainly an explanation of function rather than an identification of structure or reference to a class of structures. The specification’s lone reference to “detent or retaining mechanism” appears nowhere in the claim language. And its lone use does not indicate that Little Giant “intended to act as its own lexicographer and define the nonce term [retaining mechanism] as [a detent].” *Id.*

It is true that the “detent” referenced in the specification and depicted schematically in Figures 13C and 13D corresponds to the recited function. But the PTAB conflated the structure found in the specification that corresponds to the relevant function (*i.e.*, a detent) with the claim term “retaining mechanism” when it found that § 112 ¶ 6 was inapplicable. [PGR Decision at 11 (“In particular, Figures 13C and 13D illustrate ‘detent and retaining mechanism 250’ in the first and second positions, respectively.”)]. Looking to the specification’s use of “detent or retaining mechanism” to conclude that the “retaining mechanism” itself connotes sufficiently definite structure is the same error that led the *MTD*

Products court to reject the PTAB’s construction. 933 F.3d at 1338 (“We conclude that the Board erred by conflating corresponding structure in the specification with a structural definition for the term. . .”).

The PTAB’s reliance on the ‘416 Patent’s incorporation of Boothe does not change the Court’s conclusion. The PTAB correctly notes that the ‘416 Patent identifies Boothe as a prior art reference and incorporates it, in its entirety, in the written description of the invention. [‘416 Patent at 2, 31]. However, the specification does not specifically mention Boothe’s “pair of detent balls 108 and spring 106.” Nor does the ‘416 Patent discuss Boothe in the context of the “retaining mechanism.” Instead, the only reference to Boothe appears in the specification’s description of an unrelated hinge assembly used in an embodiment of the invention and references Figure 20, which is not the locking mechanism. [‘416 Patent 9:49–10:18]. Indeed, Boothe itself was directed at a hinge assembly, not a locking mechanism. Consequently, the ‘416 Patent’s reference to Boothe in the context of a hinge assembly says little about whether a person of ordinary skill in the art would understand the claimed “retaining mechanism” in the locking apparatus to refer to the same class of detent structures that is mentioned in Boothe.¹⁴ And that reference does not establish that the “retaining mechanism” limitation connotes sufficiently definite structure to a person of ordinary skill in the art.

¹⁴ It is noteworthy that Boothe itself does not use “retaining mechanism” to refer to its own ball-and-spring detents. Boothe’s claims explicitly reference “detents” and “detent mechanisms” throughout its written description and the claims themselves. [ECF No. 71-1 at 131–40]. This does not suggest that one of skill in the art uses these terms interchangeably.

The extrinsic evidence also does not persuade the Court that “retaining mechanism” is understood by those of ordinary skill in ladder design to refer to “detent mechanism.” Little Giant relies on the Declaration of its expert witness, Fred Smith, a mechanical engineer, to support the position that “retaining mechanism” has an art-recognized meaning of “detent.” Mr. Smith states that “a POSITA would construe ‘retaining mechanism’ to mean, ‘a mechanism that holds one mechanical part in relation to another through biasing a surface into engagement with another surface.’” [ECF No. 71-1 at 226, Ex. G, ¶ 37]. He references his own declaration submitted to the PTO in connection with the PGR proceedings. There, he opined that the specification’s reference to “detent or retaining mechanism” was not disjunctive, and pointed to the schematic Figures 13C and 13D as illustrative of how detent is synonymous with retaining mechanism. [ECF No. 71-1 at 153, Ex. E, ¶ 32]. Mr. Smith notes that: the schematics in Figures 13C and 13D show a catch or dog within the handle engaging a set of notches or indentations on a part that is fixed relative to the movement of the handle; the Boothe patent, incorporated by reference in the ‘416 Patent, discussed detent mechanisms designed to retain a handle in position through a biasing force of a spring; and Figure 20 of the ‘416 Patent shows a detent used to restrain the pin of a lock mechanism. [*Id.* at 153–59, Ex. E, ¶¶ 33–39]. Finally, Mr. Smith opines that retaining mechanism is used as a term of art in the ladder industry, citing a Collapsible Combination Ladder prior art application that disclosed a retaining mechanism for locking ladder sections relative to one another and referenced two European patents, which in turn disclosed spring-loaded detents as examples of retaining mechanisms. [*Id.* at 163–65, Ex. E, ¶¶ 42–46].

Mr. Smith's opinions, though relevant, do not persuade the Court that a person of ordinary skill in the art would understand the "retaining mechanism" referenced in the '416 Patent's claims would *necessarily* be a "detent" mechanism, and that conclusion is necessary to avoid § 112 ¶ 6 analysis. His testimony is probative of the fact that a detent is a type of retaining mechanism, and he provides examples within the ladder industry where "retaining mechanism" has been used to refer to a class of structures that can be a detent. However, other extrinsic evidence suggests that the claim term "retaining mechanism" is used across patent applications throughout the engineering arts to refer to a wide range of devices that are not synonymous with a "detent." [ECF No. 74 at 9, Ver Halen Decl. ¶ 25]. Tricam's expert points to several patent applications that use the term "retaining mechanism" to refer to an array of devices with disparate structures, including:

adhesive, VELCRO, snap fit couplings, latches, screws, flexible tabs, detents, frustoconical vanes, laterally extending wings, a friction fit, a spring, a rod or retainer, a retaining ring, a clip, a pin, a flexible finger, a ramped projection, an outwardly extending ridge, a plurality of annular projections, welding, gluing, shrink-fitting, interference fitting, locknuts, jam nuts, clamping devices, a nut and bolt assembly, a dowel, an 'E' clip retainer, a circlip, a lock washer, a push nut, a separate roughening piece, a magnetic part a time delayed adhesive, a set screw, a pin and hole, or a key and slot.

[*Id.* at 14, ¶ 36]. Mr. Smith's opinion is undermined by this laundry list of widely disparate retaining mechanisms.

In sum, in reliance on *MTD Products* and for the reasons stated above, the Court concludes that "retaining mechanism" is a means-plus-function term and the Court must identify the function and examine the specification to determine whether it discloses corresponding structure.

3. Proper Construction

Interestingly, although the parties disagree about how to get there, they agree about the corresponding structure that performs the function in question. Tricam asserts that the relevant functions are maintaining the first component in the first rotational position until application of a first force to displace it to the second rotational position; and maintaining the first component in the second rotational position until application of a second force is applied to the first component. Further, Tricam argues that the specification identifies a detent as the corresponding structure. [ECF No. 72 at 22–24]. Little Giant does not suggest there is any different function and agrees that the corresponding structure for the retaining mechanism should be construed as a detent and equivalents thereof. [ECF No. 81 at 15–16]. Moreover, the parties agree that the specification discloses the corresponding structure of a detent for performing those functions. And the Court finds that Tricam’s proposed construction of this term is supported by the intrinsic evidence.

Based on the foregoing, the Court concludes that the “retaining mechanism” in Claim 1 means: a detent, and equivalents thereof,¹⁵ configured to (1) maintain the first component in the first rotational position until application of a first predetermined force is applied to the first component to displace it towards the second rotational position; and (2) maintain the first component in the second rotational position until application of a second force is applied to the first component.

¹⁵ In addition to permitting means-plus-function claiming, § 112 ¶ 6 provides that an element expressed as a means for performing a function “shall be construed to cover the corresponding structure, material, or acts described in the specification *and equivalents thereof*.” 35 U.S.C. § 112 ¶ 6 (emphasis added).

4. Is the Detent Distinct from the First Component?

One final question must be answered regarding the “retaining mechanism” claim term. Tricam argues that the “detent” referenced in the specification for maintaining the first component in the first and second rotational positions must be a separate structure from the first component. Tricam asserts that the retaining mechanism cannot be part of the first component or any other claim element because the retaining mechanism is recited separately from the first component; the specification refers to the locking mechanism including a lever and later states that “[t]he locking mechanism **104** may include additional components . . . [which] may include a detent or retaining mechanism **250**”; and the specification does not indicate that the lever itself is configured to maintain itself in the locked and unlocked positions. In addition, Tricam notes that when prosecuting the ‘455 Patent, an ancestor to the ‘416 Patent, Little Giant attempted to amend Figure 14 to add a bored-out hole in the engagement pin and a spring-loaded ball for fitting an aperture in the retaining-pin sleeve. Tricam suggest that this reveals how Little Giant believed the detent mechanism was a completely different structure from other parts of the locking mechanism. [ECF No. 72 at 25–27].

The Court is not persuaded by Tricam’s arguments on this point. Most critically, nothing in the claim language itself explicitly requires the retaining mechanism to be a separate structure from the first component. Indeed, the language of Claim 1 does not recite a specific structural relationship between the retaining mechanism and the first component at all. Instead, the claim language merely states that the retaining mechanism is “configured

to maintain” the first component in the locked and unlocked positions. [‘416 Patent 10:55–64]. This weighs heavily against Tricam’s proposed separate-structure limitation.

Moreover, the case law cited by Tricam in support of its argument is readily distinguishable. Tricam primarily relies on *Becton, Dickinson & Co. v. Tyco Healthcare Gr., LP*, 616 F.3d 1249 (Fed. Cir. 2010), which involved a patent for safety needles and blood-collection devices. *Id.* at 1250–51. The *Becton* court was asked to interpret claim language that recited “a spring means connected to” a hinged arm for sliding a guard toward the needle tip along the needle cannula. *Id.* at 1254. The court explained that the claim language listed elements separately, including the spring means and the hinged arm—this clearly implied that the elements were distinct components of the invention. *Id.* Most importantly, the court found the argument that the spring means and the hinged arm could be the same structure would “render[] the asserted claims nonsensical.” *Id.* at 1255. The court reasoned as follows:

Independent claim 1 of the 8544 patent describes the spring means as being “connected to” the hinged arm and independent claim 24 describes it as “extending between” the hinged arm and a mounting means. If the hinged arm and the spring means are one and the same, then the hinged arm must be “connected to” itself and must “extend between” itself and a mounting means, a physical impossibility. A claim construction that renders asserted claims facially nonsensical “cannot be correct.”

Id. (quotation omitted)

Tricam cannot point to any comparable claim language in the ‘416 Patent concerning the structural relationship between the retaining mechanism and the first component that would render the asserted claims nonsensical unless they referred to separate components. Because there is no such language in this case, Tricam essentially argues that silence as to

such a structural relationship necessarily demands that two separately recited elements be entirely distinct structures. But this reading takes the *Becton* decision too far.¹⁶ As other courts have recognized, *Becton* stands for the proposition that separately recited elements must be construed as separate structures when the claim language makes a different interpretation improper. *See, e.g., Skedco, Inc. v. Strategic Operations, Inc.*, 685 F. App'x 956, 960 (Fed. Cir. 2017) (distinguishing *Becton* on grounds that the claim language at issue did not forbid one claim element from “housing” another and where an alternative construction would have led to neither a nonsensical claim meaning, nor a finding of obviousness in light of prior art); *Mfg. Res. Int'l, Inc. v. Civiq Smartscapes, LLC*, 397 F. Supp. 3d 560, 570 (D. Del. 2019) (finding reliance on *Becton* “misplaced” where the claim language at issue did not “define the relationship between” the two claim elements that were allegedly distinct structures).

For these reasons, the Court rejects Tricam’s argument that the “detent” that is corresponding structure for performing the relevant functions of the “retaining mechanism” must be a separate structure from the first component.

¹⁶ The other cases cited by Tricam in support of this argument apply *Becton* where the claim language itself recites a structural relationship indicating that claim elements are distinct. *E.g., SandBox Logistics LLC v. Proppant Express Invs. LLC*, 813 F. App'x 548, 555–56 (Fed. Cir. 2020) (concluding that “structural support members” were separate structures from “end walls” and “sidewalls” where the claim language recited “a frame including a plurality of structural support members positioned to span the end walls and side walls between end frame members to enhance support” and where the patentee expressly disclaimed a single-structure construction during prosecution to overcome a prior-art rejection); *HTC Corp. v. Cellular Commc'ns Equip., LLC*, 701 F. App'x 978, 982 (Fed. Cir. 2017) (finding that “diverting unit” and “controlling entity” were separate components where the specification consistently described the separate steps performed by each as being completed by different stacks or modules or agents).

E. “When the First Component is in the Second Rotational Position, the First Engagement Pin is Withdrawn from at Least one of the First Opening and the Second Opening”

The next disputed claim term is “when the first component is in the second rotational position, the first engagement pin is withdrawn from at least one of the first and the second opening.” As depicted in the chart below, Tricam argues that this term needs no construction, and Little Giant asks the Court to construe the term to mean: “*as the first component rotates to the second rotational position, the first engagement pin is withdrawn from at least one of the first opening and the second opening.*”

Disputed Construction		
Claim Terms and Claims	Little Giant Construction	Tricam Construction
“when the first component is in the second rotational position, the first engagement pin is withdrawn from at least one of the first opening and the second opening” (Claim 1, 5) ¹⁷	“ as the first component rotates to the second rotational position, the first engagement pin is withdrawn from at least one of the first opening and the second opening”	Tricam asserts that this term needs no construction.

[ECF No. 64 ¶ 4, No. 5].

The Court concludes that this term needs no construction. “Construction is most necessary when a claim uses technical terms for which the jury may not appreciate an ordinary meaning.” *Oxygenator Water Tech.*, 2021 WL 3661587, at *2. The relevant language here is not technical. It is straightforward and expresses a concept that is easily grasped by a

¹⁷ Like other claim terms at issue, this term appears in both Claims 1 and 5. The Court has referred here to the use of the term as it appears in Claim 1, but in Claim 5, it refers to a second component, a second engagement pin, and the third and fourth openings.

lay person as well as a person of skill in the art. *Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1373 (Fed. Cir. 2004) (noting that the claim language consisted of “ordinary, simple English words whose meaning is clear and unquestionable,” and there was “no indication that their use in this particular conjunction changes their meaning”). It simply describes where the engagement pin is *when* the first component *is in* the second rotational position (i.e., unlocked). When the first component is in that position, the engagement pin is withdrawn from the openings in the rails. Here the meaning of the claim term is clear and the scope is not genuinely in dispute, so the Court concludes that no construction is necessary. *See id.* (“When the meaning of a claim term is clear and there is no genuine dispute as to its scope, a court may decline to issue a construction.” (citing *O2 Micro Int’l*, 521 F.3d at 1362)).

Not only is no construction required, but the construction proposed by Little Giant is at odds with the plain language of the claim terms at issue. Claim 1’s temporal language plainly refers to a fixed point in time. Little Giant’s proposal would substitute “as” and “rotates to” for “when” and “is in” respectively, essentially describing what happens while an action is being performed with the locking mechanism. This contrasts with what the ‘416 Patent’s claim language discloses, which is plainly a description of the orientation of the locking mechanism’s elements to one another once that action is completed. Rather than help clarify the meaning of the claims, Little Giant’s proposal simply rewrites them.

Little Giant suggests that the Court ought to depart from the plain and ordinary meaning of the terms “when” and “is in” because the ‘416 Patent disparaged earlier locking mechanisms that used lateral displacement, as opposed to a rotational force, to remove the

engagement pin from apertures in the rails. Little Giant argues that such statements about the prior technology represent “a clear disavowal of claim scope” for any locking mechanism that requires the user to manually pull the pin out laterally from the rails. And Little Giant points to the description of the operation of the locking mechanism in the ‘416 Patent as indicating that the invention claims only the use of a rotating handle that causes a pin to be withdrawn from the rails, not by manually pulling the pin out from the rails. [ECF No. 70 at 20–21].

Little Giant correctly points out both that the ‘416 Patent mentions problems that were caused by previous locking mechanisms of the “lock tab” variety and that the operation of the new locking mechanism is more ergonomic. Specifically, in the “Background” portion of the written description, the ‘416 Patent notes that actuating those prior art locking mechanisms through “lateral displacement . . . can be awkward and difficult for some people to perform,” especially for smaller users. [‘416 Patent Col. 1:66–2:8]. The ‘416 Patent also states that:

The squeezing operation of the locking mechanism **104** or the application of force in a direction toward the inner and outer rails **101** and **105** of the first assembly **102** is more ergonomic and natural for a user as compared to conventional lock tabs and provides for more efficient use of the ladder **100**.

[*Id.*, Col. 8:24–29]. However, these statements regarding the prior technology and benefits of the claimed locking mechanism neither represent a clear disavowal of claim scope, nor support Little Giant’s proposed construction.

In support of its argument to the contrary, Little Giant cites *Teleflex, Inc. v. Ficosa North American Corp.*, 299 F.3d 1313 (Fed. Cir. 2002), which observed that a “patentee may demonstrate an intent to deviate from the ordinary and accustomed meaning of a claim term

by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.” *Id.* at 1325. However, the *Teleflex* court examined Federal Circuit precedent and found no support for the proposition that disclosure of a single embodiment in the specification limits the claim terms to that disclosed embodiment. *Id.* at 1326–27. The court held:

claim terms take on their ordinary and accustomed meanings unless the patentee demonstrated an intent to deviate from the ordinary and accustomed meaning of a claim term by redefining the term or by characterizing the invention in the intrinsic record using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope.

Id. at 1327. The comments in the ‘416 Patent regarding issues with the prior technology and the benefits of the new locking mechanism do not redefine what “when” and “is in” mean in the claim language. There is no clear statement indicating that the claim language deviated from the plain and ordinary meaning of “when” and “is in” so that the scope of the claim excluded any locking mechanism where the engagement pin’s withdrawal was not caused by the pivoting action of the handle. “Absent such clear statements of scope, we are constrained to follow the language of the claims, rather than that of the written description.” *Id.* at 1328.

Little Giant also relies on *Openwave Systems, Inc. v. Apple, Inc.*, 808 F.3d 509 (Fed. Cir. 2015). However, Little Giant’s reliance on this decision is similarly misplaced. The *Openwave Systems* court affirmed a district court construction that found a patentee disavowed claim scope by making “repeated derogatory statements” concerning mobile devices containing internal computer modules. *Id.* at 512–13. The court explained that “[t]he standard for disavowal of claim scope . . . is exacting.” *Id.* at 513 (quoting *Thorner v. Sony Comput. Entm’t*

Am. LLC, 669 F.3d 1362, 1366 (Fed. Cir. 2012)). “To find disavowal of claim scope through disparagement of a particular feature, we ask whether the specification goes well beyond expressing the patentee’s preference such that its repeated derogatory statements about a particular embodiment reasonably may be viewed as a disavowal.” *Id.* (cleaned up). In *Openwave Systems*, the patentee did not just reference a single embodiment of a cellular telephone that explicitly excluded devices including an internal computer module. “The specification of the patents-in-suit [was] rife with remarks that disparage and, therefore, disclaim, mobile devices that incorporate computer modules.” *Id.* at 514. The court identified example after example of how the specification repeatedly and clearly distinguished the invention from prior art that included the internal computer modules. *Id.* at 514–17. As a result, the “high bar to finding disavowal of claim scope through disparagement of the prior art in the specification” was satisfied. *Id.* at 517.

Here, that high bar simply is not met. The portions of the ‘416 Patent’s specification that are arguably disparaging of the prior art are considerably less explicit than those at issue in *Openwave Systems*. While it is true that the specification speaks of issues with the previous “lock tab” mechanisms and identifies ergonomic benefits of the present invention, Little Giant has not identified a case in which the exacting standard was satisfied where the alleged disparagement was comparably limited. The ‘416 Patent’s specification does not provide such repeated derogatory statements about the use of lateral displacement of the engagement pins that the Court can reasonably consider it to constitute unambiguous evidence of disclaimer.

Aside from Little Giant's unpersuasive argument that the specification's negative remarks about the earlier lock tab mechanisms adequately disavowed claim scope, the claim language itself counsel's against Little Giant's proposed construction. Although the '416 Patent's specification certainly connects the pivoting action of the handle to the displacement of the engagement pins from the openings in the inner and outer rails, the Court does not find that this provides a sufficient basis to rewrite the claim language as Little Giant proposes. The importance of the claim language in resolving issues of claim interpretation cannot be overstated. *Teleflex*, 299 F.3d at 1324 ("The claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim. The language of the claim frames and ultimately resolves all issues of claim interpretation." (cleaned up)). The Federal Circuit has "repeatedly and consistently recognized that courts may not redraft claims, whether to make them operable or to sustain their validity." *Chef Am., Inc.*, 358 F.3d at 1374 (citing cases). Here, it seems the inventors of the '416 Patent could have easily drafted the relevant language in Claim 1 to reflect Little Giant's now preferred construction, but they chose to draft it using "when" and "is in" rather than "as" and "rotates to." The words they chose are unambiguous and the Court will "construe the claim as written, not as the patentees wish they had written it." *See id.* at 1374.

Because doing so would be unnecessary, the Court declines to give any construction to this claim language.

F. “A First Component Rotatable About a Defined Axis”

The final claim term in dispute is “a first component rotatable about a defined axis.”

Though the parties disagree on the proper construction of this term, they do agree that it is a means-plus-function term that must be construed according to 35 U.S.C. § 112, ¶ 6.

Narrowing the issue even more, the parties agree that the relevant function performed is “to rotate about a defined axis.” The parties’ proposed constructions are set forth in the table below.

Disputed Construction		
Claim Terms and Claims	Little Giant Construction	Tricam Construction
“a first component rotatable about a defined axis” (Claim 1, 5) ¹⁸	<p>Function: to rotate about a defined axis</p> <p>Corresponding Structure: a handle and equivalents thereof</p>	<p>Function: rotate about a defined axis</p> <p>Corresponding structure: a lever</p>

[ECF No. 64 ¶ IV, No. 7].

Based on the intrinsic evidence, the Court agrees that this language involves means-plus-function claiming and is therefore governed by § 112 ¶ 6, and that the parties have accurately identified the relevant function. The claim term “first component” does not itself connote any obvious structure, and there is no surrounding claim language that clearly connotes structure. Instead, the surrounding claim language is functional; it expresses what

¹⁸ Again, this claim term appears in both Claims 1 and 5, the only difference being that in Claim 5, the phrase refers to a “second component rotatable about a defined axis.”

the first component does or performs. As expressed in the claims, the function performed by the first component is, indeed, to rotate about a defined axis.

Applying the legal framework for § 112 ¶ 6 discussed above, the Court must now identify what structure, if any, corresponds to the function of rotating about a defined axis. Tricam argues that the only structure disclosed anywhere in the specification is “a lever,” and that the prosecution history further supports a construction limiting the relevant structure to a lever. [ECF No. 72 at 28–32]. Little Giant proposes something broader. For the reasons that follow, the Court finds that Tricam’s proposal too narrowly defines the corresponding structure identified in the specification.

According to Tricam, the specification refers to a “lever” as part of the locking mechanism that pivots or rocks relative to the outer rails. Although Tricam accurately points to references in the written description to an embodiment of the invention in which the locking mechanism employs a lever, and to figures that show a lever-style handle that closely resembles Little Giant’s commercialized “Rock Lock” products,¹⁹ Tricam overlooks other references in the specification to very different structures that are also capable of performing the function of rotating about a defined axis. Specifically, the specification includes Figures 15, 16, and 17, which depict embodiments of the claimed locking mechanism that do not employ a lever-style design. The written description associated with Figure 16, for example, states that it “shows an embodiment of the locking mechanism **108** . . . [which] includes a handle **160** rotatably coupled to a pair of links **161A** and **161B**, which are in turn pivotally

¹⁹ ‘416 Patent Cols.2:31–33, 7:37–41, 8:6–8; *id.*, Figs. 13A, 13B, and 14.

coupled to a pair of pins **162A** and **162B**, respectively.” [‘416 Patent, Col. 8:50–57]. The description goes on to discuss rotating “the handle” to operate the locking mechanism. [*Id.*, Col. 8:60–66]. The description associated with the rotatable handle depicted in Figure 17 similarly indicates it is an embodiment of the invention that pivots and rotates to operate the locking mechanism. [*Id.*, Col. 9:4–19]. Both of these structures correspond to the function of rotating about a defined axis, but neither is aptly described by a construction that is limited to “a lever.” The Court concludes that Tricam is simply incorrect that the specification fails to disclose any corresponding structure other than a lever.

Tricam’s citations to the file history do not provide persuasive evidence that the inventor and the examiner understood the corresponding structure for performing the relevant function to be limited to the lever-style embodiment depicted in Figures 13A, 13B, and 14. Simply put, Tricam cites portions of the file history where the term “lever” is used, but those references do not specifically relate to the proper interpretation of the claim language at issue here.²⁰ As such, Tricam’s prosecution-history argument is unpersuasive on this issue, and the Court finds that “a lever” is too narrow a construction for identifying corresponding structure.

Section 112 ¶ 6 provides that when an element is expressed as a means for performing a specified function, the claim must be construed to cover the corresponding

²⁰ Tricam references comments made in response to the reasons that the examiner gave for rejecting the claims initially, including the prior-art rejection based on Grebinoski. Although Little Giant referred to “the lever” in its responses to the examiner’s comments, Tricam identifies nothing in that discussion that indicates that Little Giant or the examiner were attempting to identify corresponding structure under § 112 ¶ 6.

structure or material described in the specification and equivalents thereof. Here, as noted, the specification identifies both a lever and the handles identified in Figures 16 and 17, which rotate clockwise and counterclockwise, rather than pivoting on an axis that is parallel to the plane of the inner and outer rails. These structures all correspond to the relevant function, and they are therefore appropriately included in the relevant construction of these claim terms. Accordingly, the Court concludes that the corresponding structures disclosed in the '416 Patent for performing the function of rotating about a defined axis are a lever or a handle. As a result "a first component rotatable about a defined axis," is construed to mean "a lever or handle rotatable about a defined axis."

IV. Order

Based on the foregoing, **IT IS HEREBY ORDERED THAT** the terms of U.S. Patent No. 10,767,416 be construed as set forth above.

Date: June 24, 2022

s/ Katherine Menendez
Katherine Menendez
United States District Judge